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Please find below and/or attached an Office communication concerning this application or proceeding.

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Attached please find the signed version of paper #17. Signatures or initials of the cinferees are added in page 14.

Wenpeng Chen
Primary Examiner
Art Unit: 2624

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 17

Application Number: 09/902,515
Filing Date: July 09, 2001
Appellant(s): COLLINS, ROGER

Mark L. Watson
For Appellant

EXAMINER'S ANSWER
(corrected version)

This is in response to the appeal brief filed on March 8, 2004 and in response to the Order given by the Board on 12/02/2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

However, the Appellant did not state status of Claims 6-8, 15, and 27-29. Claims 6-8, 15, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Unger and Ackley (US patent 6,422,476.)

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

No amendments to claims were made in the amendments after final rejection. Only arguments were provided.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that the group of claims of 1-8 and 22-29 and the group claims 9-16 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

The typo in page 5 of the Appeal Brief (paper #13) is corrected: "Group III" shall be changed to "Group II".

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,293,379	CARR	3-1994
5,991,713	UNGER et al.	11-1999
6,422,476	ACKLEY	7-2002

"Computer Dictionary", Microsoft Press, 2nd edition, 1994, page 143.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-5, 9, 12, 14, 22 and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Carr (US patent 5,293,379 cited previously.)

a. For Claims 1 and 4-5, Carr teaches a method comprising:

-- identifying a first field and a second field within an electronic mail (mail) message; (column 6, line 64 to column 7, line 46; Figs. 5-6; The data are identified as a set of static, semi-static and dynamic fields collected header fields that represents a collected first filed and user data that represent a second field.)

-- applying a first set of code words to encode data in the first field; (column 6, line 64 to column 7, line 46; Figs. 5-6; The set of static, semi-static and dynamic fields collected header fields that represents a collected first filed is coded with header dictionary that has a first set of code words.)

-- applying a second set of code words to encore data in the second field; (column 6, line 64 to column 7, line 46; Figs. 5-6; The user data that represent a second field are coded with a user data dictionary that has a second set of code words.)

-- wherein the first field is an email header field and the second field is an email text field; (column 1, lines 39-47; Fig. 5; A message transferred in a network is an email. The set of static, semi-static and dynamic fields is an email header.)

-- wherein the first field is an address book field and the second field is an email message field. (column 1, lines 39-47; Fig. 5; A message transferred in a network is an email. Carr teaches that destination address and source address are included in the header data set. Therefore, the header is considered as an address book field.)

b. For Claims 9, 12, and 14, Carr teaches a method comprising:

-- generating a first code word table containing code words for a plurality of character strings found in a first electronic mail (email) message field; (column 6, line 64 to column 7, line 46; Figs. 5-6; The generated header dictionary is the first code word table.)

-- generating a second code word table containing code words for a plurality of character strings found in a second email message field; (column 6, line 64 to column 7, line 46; Figs. 5-6; The generated data dictionary is the second code word table.)

-- encoding character strings in the first field using the first code word table and character strings in the second field using the second code word table; (column 6, line 64 to column 9, line 4; Figs. 5-9)

-- wherein the first field is an email address field; (column 1, lines 39-47; Fig. 5; A message transferred in a network is an email. The set of static, semi-static and dynamic fields is an email header. Carr teaches that destination address and source address are included in the header data set in the static and semi-static fields. Therefore, the header part associated with the static and semi-static fields is considered as an address field.)

-- encoding the message further using one or more alternate compression techniques. ((1) column 7, lines 13-16: Compression techniques other than LZW can be used. (2) Fig. 6 also shows that user data of different protocols can be compressed with different data dictionaries. LZW with different data dictionaries is considered in general to be different compression techniques.)

c. With regard to Claims 22 and 25-26, Carr further teaches machine-readable medium having program code stored thereon to carry out the steps of Claims 22 and 25-26, the steps being discussed above. (column 4, lines 33-51)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-3, 10-11, 16, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr as applied to Claims 1, 9, and 22, and further in view of Unger et al. (US patent 5,991,713 cited previously.)

Carr teaches the parental Claims 1, 9, 22. Car further teaches that other string compression algorithms are also applicable in the method explained with Figs. 3-9, namely compressing header and data with different dictionaries. However, Carr does not teach explicitly that the code words are based on the frequency associated to the above claims.

Unger teaches a method for compressing a message. In the method, different types of data are coded with different dictionaries. (column 8, line 62 to column 9, line14) The method comprises:

-- generating for each dictionary a set of code words based on the frequency with which character strings represented by the code words are found within the type of data, wherein character strings which are relatively more common within the type of data are represented by relatively shorter code words in the set of code words; (column 1, lines 39-46; column 2, lines

23-54; column 9, lines 39-54; Each data of a language and subject is associated with a dictionary. Shorter token is assigned to a word of high frequency.)

-- initially performing a statistical analysis of character strings found in the type of data to determine a frequency of occurrence of each of the character strings; (To establish a dictionary based on frequency requires performing a statistical analysis of character strings in that type of data.)

-- wherein one of the techniques comprises identifying strings in the first or second fields based on a location of the strings in a spell-check dictionary. (column 8, line 61 to column 9, line 54; column 11, lines 6-18; Figs. 8-9; step 210 of Fig. 8; A dictionary of common English words is a spell check dictionary. The numbers (or tokens) are the locations.)

It is desirable to compress efficiently a text message. It is known in the art that Unger's dictionary can achieve a high degree of compression for each specific dictionary associated with a special language or subject. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to replace Carr's dictionaries with dictionaries developed with Unger's teaching for each of the header data and user data because this replacement improves compression efficiency. The combination thus teaches the following features:

-- initially performing a statistical analysis of character strings found in the first email message field and the second email message field to determine a frequency of occurrence of each of the character strings;

-- generating the first set of code words based on the frequency with which character strings represented by the code words are found within the first field;

-- generating the second set of code words based on the frequency with which character strings represented by the code words are found within the second field;

-- wherein character strings which are relatively more common within the first field are represented by relatively shorter code words in the first set of code words and character strings which are relatively more common within the second field are represented by relatively shorter code words in the second set of code words.

5. Claims 6-8, 15, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Unger as discussed above, and further in view of Ackley (US patent 6,422,476 cited previously.)

The combination of Carr and Unger teaches method and medium for compression of email text with dictionaries taught by Unger as discussed above. However, the combination does not teach the conversion associated with the he above-listed claims.

Ackley teaches a method for data compression in which

-- ASCII text is converted to a 6-bit character format; (column 4, lines 49-65; column 7, lines 24-53)

-- providing one or more 6-bit escape sequences indicating that code following the sequence represents data compressed using a particular compression technique; (codes 47-52 of Fig. 1 and Fig. 8; Codes 47-52 of Fig. 1 are the 6-bit escape codes, each initiating a particular compression technique.)

-- wherein relatively common characters are encoded using 6 bits and relatively uncommon characters are encoded using two successive sequences of 6 bits. (Fig. 4; For

example, the common character such as ASCII code 65 (A) is assign a 6-bit 93i word A and the relatively uncommon character such as ASCII code 34 (*) is assign two 6-bit words: 93i word [S3] and 93i word B.)

It is desirable to compress more efficiently a text message that comprises mostly the full ASCII characters. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Ackley's teaching to the method taught by the combination of Carr and Unger, because with converting ASCII text to the 6-bit character format the overall combination improves compression efficiency.

For the above reasons, it is believed that the rejections should be sustained.

(11) Response to Argument

a. Appellant's argument -- For Claim group I, nowhere in Carr are email messages disclosed. There is no disclosure in Carr of identifying a first field and a second field within an email message. The rejection under 35 U.S.C. 102(b) as being anticipated by Carr is improper.

Examiner's answer --

This is the major point of the Appellant's argument. All of the other arguments rely on truth of this statement. The Examiner disagrees with the conclusion.

The Appellant does not agree that messages transferred through a network such as LAN and WAN as shown in Fig. 1 taught by Carr are emails. To resolve this issue, let us see the definition given by Computer Dictionary (Microsoft Press, 2nd edition, 1994, page 143, Attachment 1.) In Computer Dictionary, the term "electronic mail" is defined in the dictionary as "the transmission of messages over a communication network." The network includes local area network.

In column 1, lines 15-26 and lines 39-47, Carr teaches that:

"**Data transferred over communication links** between commercial computer systems generally contains significant redundancy. A number of mechanisms and procedures exist for lessening the redundancy and for creating substantially more efficient use of the transmission bandwidth. The term "data compression" refers to any process that converts data in a first given format into a second format having fewer bits than the original. Data compression systems are particularly effective if the original data contains substantial redundancy, such as symbols or strings of symbols which repetitively appear with high frequency."

"Such systems can be found today in **wide area networks (WAN's)**, which interconnect pluralities of **Local Area Networks (LAN's)**. In general, internal LAN interconnections occur over wide bandwidth, hard-wired or optical interconnects that alleviate the requirements for data compression. By contrast, most WAN's employ the telephone network for LAN interconnection purposes, and, as a result, are significantly bandwidth-limited."

Evidently, Carr's data (message) are transmitted over a communication network and thus is an email.

Secondly, let us see whether the fields are within an email message. It is well known for email users that an email contains sender information, receiver information, and text as shown in an email example dated 3/3/2000 (attachment 2.) **All of sender information, receiver information, and text are message of the email because they provide messages about "who sent it," "who shall receive it," and "the sent information." Therefore any filed associated with sender information, receiver information, and text is a field within an email message.**

In Final Rejection (paper #8), the Examiner clearly pointed out that the passages in column 6, line 64 to column 7, line 46 and Figs. 5-6 teach the first and second fields within an email message: the combined data of static, semi-static and dynamic fields is a collected first field and user data is a second field. As shown in Fig. 5, the first field comprises "destination address" which is receiver information and "source address" that is sender information.

As clearly shown in column 1, lines 7-12, and column 4, lines 19-51, Carr patent is related to compression, transmission, and decompression of packet data. In column 8, lines 13-21 and lines 52-62, Carr further teaches that the header data and user data consist of character strings:

"Once the packet is reformatted, header data compression commences (see FIG. 8). For the purposes of this example, it is assumed that an LZW header dictionary table has been established and initialized with an initial character set of 256 entries. The algorithm commences at the header's first reformatted byte (box 58) and matches the **characters in the header**, character by character, with **character strings** stored in the header dictionary." And

"Once header data compression is completed, the user-data portion of the packet is data compressed (see FIG. 9). In this instance, however, a compression dictionary table is utilized which corresponds to the identified packet type (box 64) so as to assure a greater likelihood of **string character** match. Thus, using the LZW user-data dictionary corresponding to the packet type, the **user-data** is compressed using the standard LZW procedure. Codes are then outputted for the compressed data, followed by the unencoded data (box 66) and the reformatted packet then loaded to an output buffer."

It is well known to anybody that a text email message is provided with characters in the header to indicate the sender's and receiver's addresses and the content of the sent information. The character strings of Carr further proves that Carr's electronic mail delivered between LAN and WAN also include a text message in the second field (user data field.) **Therefore, Carr teaches identifying a first field and a second field within an email message.**

Because the group of claims of 1-8 and 22-29 stand and fall together, there no error in rejecting these group of claims under 35 U.S.C. 102(b) as being anticipated by Carr.

b. Appellant's argument -- For Claim group I, neither Carr nor Unger teaches identifying a first field and a second field within an email message. The rejection under 35 U.S.C. 103(a) over Carr in view of Unger is improper.

Examiner's answer -- The Examiner did not rely on Unger to teach this feature. As explained above, Carr indeed teaches identifying a first field and a second field within an email message. The argument is thus incorrect. The rejection under 35 U.S.C. 103(a) is proper.

c. Appellant's argument -- For Claim group II, Carr does not teach generating a first code word table containing code words for a plurality of character strings found in a first electronic mail (email) message field and a second code word table containing code words for a plurality of character strings found in a second email message field. The rejection under 35 U.S.C. 102(b) as being anticipated by Carr is improper.

Examiner's answer -- As explained above, Carr indeed teaches identifying a first field and a second field within an email message. Also explained above, in column 8, lines 13-21 and lines 52-62, Carr further teaches that the header data (first field) and user data (second field) consist of character strings.

In column 6, line 64 to column 7, line 46 and Figs. 5-6, Carr teaches using dictionary tables as shown below.

"Thus, given the above packet data fields and their essential characteristics, the invention reorders them by segregating them as follows: static; recalculatable; semi-static; and dynamic. The reordered fields occupy the same memory space as the original packet header. The static, recalculatable, and semi-static fields are then compressed using a modified LZW protocol **with a dictionary table that is created specifically for the header data.** Compression continues into the dynamic fields until the first incompressible field is encountered, at which point the remainder of the dynamic fields are not encoded, but are sent through as unencoded eight bit data. Then, **the type field of the LAN packet is used to select a "user-data" LZW dictionary**, which dictionary is used to compress the user-data portion of the LAN packet. At the end of the packet, a bit is appended that indicates whether the user data field has been compressed. While it is preferred to use the LZW algorithm, the compression of reformatted packet fields can be done using other string compression algorithms."

As shown, dictionaries are used to code the header data and user data. The dictionaries are generated through retrieval or creation as indicated above. Because dictionaries are code word tables for compression and decompression, Carr thus teaches generating the above first and second code word tables. The rejection under 35 U.S.C. 102(b) as being anticipated by Carr is proper.

d. Appellant's argument -- For Claim group II, neither Carr nor Unger teaches generating a first code word table containing code words for a plurality of character strings found in a first electronic mail (email) message field and a second code word table containing code words for a plurality of character strings found in a second email message field. The rejection under 35 U.S.C. 103(a) over Carr in view of Unger is improper.

Examiner's answer -- The Examiner relies on Carr, not Unger to teach this feature. As explained above, Carr indeed teaches this feature. The Appellant's argument is thus incorrect. The rejection under 35 U.S.C. 103(a) is proper.

e. Examiner's comment

The Appellant does not specifically argue about rejection of Claims 6-8, 15, and 27-29 under 35 U.S.C. 103(a) based on Carr in view of Unger Ackley. Because the group of claims of 1-8 and 22-29 stand and fall together, Claims 6-8, 15, and 27-29 fall together with Claim 1. Therefore, the Examiner maintains the above rejection to Claims 6-8, 15, and 27-29.

Respectfully submitted,

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August 31, 2005

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